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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,247	03/09/2001	Simon C. Borst	13-7	7062

7590 04/04/2005

Ryan, Mason & Lewis, LLP
90 Forest Avenue
Locust Valley, NY 11560

EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/803,247

Applicant(s)

BORST ET AL.

Examiner

Robert W Wilson

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,12,18-22 is/are rejected.
- 7) ☒ Claim(s) 4,6-11 and 13-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.


PHIRIN SAM
PRIMARY EXAMINER

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Claim Rejections - 35 USC § 102

1.0 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.0 Claims 1-3, 5, 12, & 20 are rejected under 35 U.S.C. 102(E) as being anticipated by Rimhagen (U.S. Patent No.; 6,721,278 B1).

Referring to claim 1, Rimhagen teaches: A system which allocates channels among users per col. 2 lines 39-67 using an inherent TDMA channel in a GSM system where requests are also inherent GSM per col. 1 line 7-co. 2 line 37 (method of scheduling).

The allocator (scheduler) assigns a radio channel (interval) to a user per col. 2 line 40-col. 3 line 14,

The applicant does not specifically define “coefficients of a revenue vector” in the claim. The reference teaches ranking the user in a plurality of users for assignment of a radio channel (interval) based upon a vector which utilizes bit rate (feasible rate) which the examiner has interpreted as a “coefficients of a revenue vector”. The values of bit rate varies so the vector function is must be periodically or iteratively updated using an inherent adaptive algorithm per col. 2 line 39-col. 3 line 15 (identifying).

The allocator assigns a TDMA time slot or interval to a user per col. 2 line 39-col. 3 line 15 (Scheduling).

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Regarding claim 2, The allocator is utilized in a GSM TDMA and scheduling is inherently performed in a base station over a wireless network an assigns downlink transmission to users per col. 1 line 6-col. 3 line 15.

Regarding claim 3, The vector is determined based upon bit rate which has been determined without direct estimation per col. 1 line 6-col. 3 line 15.

Regarding claim 5, The scheduler assigns TDMA time slots which are inherently fixed-duration transmission slots for one user at a time per col. 1 line 6-col. 3 line 15.

Regarding claim 12, The applicant does not define "randomly-selected transmission interval" in the claim. The examiner interprets that the vector being inherently updated as required is the same as a "randomly-selected transmission interval" per col. 1 line 6-col. 3 line 15.

Referring to claim 20, Rimhagen teaches: An apparatus for allocating channels in a network per col. 2 lines 39-67 using an inherent using an inherent TDMA channel in a GSM system where requests are also inherent GSM per col. 1 line 7-co. 2 line 37 (method of scheduling).

The allocator is in a GSM system per col. 1 line 10-col. 2 line 37; consequently, the allocator would inherently be in a base station. The allocator assigns a radio channel (interval) to a user per col. 2 line 40-col. 3 line 14,

The applicant does not specifically define "coefficients of a revenue vector" in the claim. The applicant does not define a maximum rate user in the claim. The reference teaches ranking the user in a plurality of users for assignment of a radio channel (interval) based upon a vector which utilizes bit rate from a plurality of users which the examiner has interpreted as a "coefficients of a revenue vector" in order to determine a user which the examiner has interpreted as a maximum rate user. The values of bit rate varies so the vector function is must be periodically or iteratively updated using an inherent adaptive algorithm per col. 2 line 39-col. 3 line 15
The allocator assigns a TDMA time slot or interval to a user per col. 2 line 39-col. 3 line 15 (

Claim Rejections - 35 USC § 103

3.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 18 & 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rimhagen (U.S.

Patent No.: 6,721,278) in view of Maxur (U.S. Patent No.: 6,072,792)

Referring to claim 18, Rimhagen teaches: The method of claim 1, wherein the identifying and schedule steps are applied jointly to multiple users per col. 2 line 39-col. 3 line 15.

Rimhagen does not expressly call for: scheduling performed by a base station.

Maxur teaches: scheduling performed by a base station per Fig 2 or per col. 6 line 5-col. 7 line 57.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add performance of scheduling in Based Station of Maxur to the scheduling of Rimhagen so that the wireless mobiles are controlled from a central location that is geographically fixed.

Referring to claim 19, Rimhagen teaches: The method of claim 1,

Rimhagen does not expressly call for: wherein the identifying and scheduling steps are applied so as to take into account diversity antennas associated with one or more base station of the communication network.

Maxur teaches: wherein the identifying and scheduling steps are applied so as to take into account diversity antennas associated with one or more base station of the communication network per Fig 2 or per col. 6 line 5-col. 7 line 57.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add diversity scheduling of antennas of the base stations of Maxur to the scheduler of Rimhagen in order to improved the probability of receiving a message.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rimhagen (U.S. Patent

No.: 6,721,278) in view of Tiedemann (U.S. Patent No.: 5,914,950)

Referring to claim 21, Rimhagen teaches: The allocator (scheduler) assigns a radio channel (interval) to a user from a plurality of users which are in a inherent GSM TDMA system requests for data transmissions are inherent per col.1 line 7-col. 3 line 14. The applicant does not specifically define "coefficients of a revenue vector" in the claim. The applicant does not define a maximum rate user in the claim. The reference teaches ranking the user in a plurality of users for assignment of a radio channel (interval) based upon a vector which utilizes bit rate from a plurality of users which the examiner has interpreted as a "coefficients of a revenue vector" in order to determine a user which the examiner has interpreted as a maximum rate user. The values of bit rate varies so the vector function is must be periodically or iteratively updated using an inherent adaptive algorithm per col. 2 line 39-col. 3 line 15 (identifying).

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The allocator (scheduler) assigns a TDMA time slot or interval to a user per col. 2 line 39-col. 3 line 15 (Scheduling).

Rimhagen does not expressly call for: a processor or memory but teaches a allocator per col. 1 line 5 –col. 3 line 14.

Tiedemann teaches: a controller (processor) and a memory per Fig 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processor and memory of Tiedemann to the allocator or scheduler of Rimhagen in order to build a scheduler.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rimhagen (U.S. Patent No.: 6,721,278)

Referring to 22, It is within the level of one skilled in the art at the time of the invention to implement the method of claim 1 in software. It would also be obvious to one of ordinary skill in the art at the time of the invention to store the software on a computer readable medium so that it could be executed on a processor.

Claim Objections

4.0 Claims 4, 6-11, & 13-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

5.0 Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection. Refer to the above rejection for details.


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Conclusion

6.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

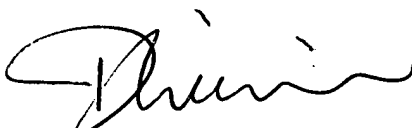
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
3/23/05



**PHIRIN SAM
PRIMARY EXAMINER**